Monday, December 6, 1999 – WB Wade Avenue Extension – ATR site A-9107

Background: Our first day of data collection was at a relatively new permanent automatic traffic recorder (ATR) installation operated by the NCDOT Traffic Survey Unit. The site is located on westbound Wade Avenue Extension between the exits for Blue Ridge Road and Edwards Mill Road in west Raleigh. All ATR stations in the state use 6 foot x 6 foot loops embedded in the pavement and wired to a permanent recorder on the roadside. This site was selected by the TSU as a "benchmark" site because it was expected that the detector counts would be very accurate here (since the detectors exist for the purpose of counting vehicles).

Westbound Wade Avenue Extension is a controlled access freeway with a 55-MPH posted speed limit. The heaviest traffic occurs during the morning peak hour, when motorists from Raleigh and further east and northeast travel westbound toward Research Triangle Park (RTP). The level of service during the morning peak is LOS F, with stop-and-go conditions prevailing. Traffic generally moves near the speed limit at other times.

This section of Wade Avenue Extension possesses two through lanes and one outer auxiliary lane. The auxiliary lane contains weaving traffic between the Blue Ridge Road on-ramp and the Edwards Mill Road off-ramp. We refer to the auxiliary lane as the "outside" lane, the rightmost through lane as the "middle" lane and the leftmost through lane (adjacent to the grass median) as the "inside" lane. There was a single 6 foot by 6 foot inductive loop in each lane. We noted that weaving maneuvers were occasionally taking place over the loops in the outside and middle lanes, which we suspected might lead to overcounting.

Three members of the Traffic Survey Unit counted traffic during three time periods: 7-9 AM, 11 AM – 12 noon, 2-5 PM. From 7-9 AM, the ATR equipment was set to 1-hour counting bins. Remaining counts were divided into 15-minute bins. Therefore, there were a total of 16